

Mathematics

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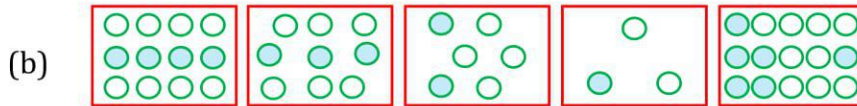
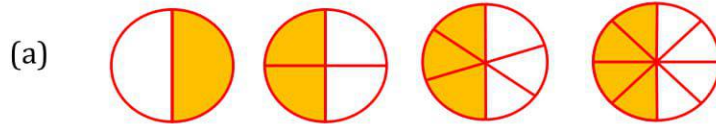
(Chapter - 7) (Fractions)

(Class - VI)

Exercise 7.3

Question 1:

Write the fractions. Are all these fractions equivalent:



Answer 1:

(a) $\frac{1}{2}, \frac{2}{4}, \frac{3}{6}, \frac{4}{8}$

Yes, all of these fractions are equivalent.

(b) $\frac{4}{12}, \frac{3}{9}, \frac{2}{6}, \frac{1}{3}, \frac{6}{15}$

No, these fractions are not equivalent.

Question 2:

Write the fraction and pair up the equivalent fractions to each row:



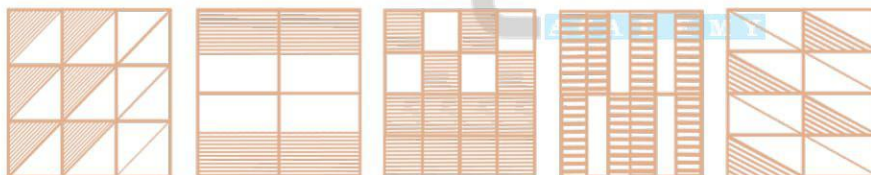
(a)

(b)

(c)

(d)

(e)



(i)

(ii)

(iii)

(iv)

(v)

Answer 2:

(a) $\frac{1}{2}$

(ii) $\frac{4}{8} = \frac{1}{2}$

(b) $\frac{4}{6} = \frac{2}{3}$

(iv) $\frac{8}{12} = \frac{2}{3}$

(c) $\frac{3}{9} = \frac{1}{3}$

(i) $\frac{6}{18} = \frac{1}{3}$

(d) $\frac{2}{8} = \frac{1}{4}$

(v) $\frac{4}{16} = \frac{1}{4}$

(e) $\frac{3}{4}$

(iii) $\frac{12}{16} = \frac{3}{4}$

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(Chapter - 7) (Fractions)

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Question 3:

Replace \square in each of the following by the correct number:

(a) $\frac{2}{7} = \frac{8}{\square}$

(b) $\frac{5}{8} = \frac{10}{\square}$

(c) $\frac{3}{5} = \frac{\square}{20}$

(d) $\frac{45}{60} = \frac{15}{\square}$

(e) $\frac{18}{24} = \frac{\square}{4}$

Answer 3:

(a) $\frac{2}{7} = \frac{2 \times 4}{7 \times 4} = \frac{8}{28}$

(b) $\frac{5}{8} = \frac{5 \times 2}{8 \times 2} = \frac{10}{16}$

(c) $\frac{3}{5} = \frac{3 \times 4}{5 \times 4} = \frac{12}{20}$

(d) $\frac{45}{60} = \frac{45 \div 3}{60 \div 3} = \frac{15}{20}$

(e) $\frac{18}{24} = \frac{18 \div 6}{24 \div 6} = \frac{3}{4}$

Question 4:

Find the equivalent fraction of $\frac{3}{5}$ having:

(a) denominator 20

(b) numerator 9

(c) denominator 30

(d) numerator 27

Answer 4:

(a) $\frac{3}{5} = \frac{3 \times 4}{5 \times 4} = \frac{12}{20}$

(b) $\frac{3}{5} = \frac{3 \times 3}{5 \times 3} = \frac{9}{15}$

(c) $\frac{3}{5} = \frac{3 \times 6}{5 \times 6} = \frac{18}{30}$

(d) $\frac{3}{5} = \frac{3 \times 9}{5 \times 9} = \frac{27}{45}$

Question 5:

Find the equivalent fraction of $\frac{36}{48}$ with:

(a) numerator 9

(b) denominator 4

Answer 5:

(a) $\frac{36}{48} = \frac{36 \div 4}{48 \div 4} = \frac{9}{12}$

(b) $\frac{36}{48} = \frac{36 \div 12}{48 \div 12} = \frac{3}{4}$

Question 6:

Check whether the given fraction are equivalent:

(a) $\frac{5}{9}, \frac{30}{54}$

(b) $\frac{3}{10}, \frac{12}{50}$

(c) $\frac{7}{13}, \frac{5}{11}$

Answer 6:

(a) $\frac{5}{9}, \frac{30}{54} = \frac{5 \times 6}{9 \times 6}, \frac{30}{54} = \frac{30}{54}, \frac{30}{54}$

Therefore, $\frac{5}{9}, \frac{30}{54}$ are equivalent.

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$$(b) \frac{3}{10}, \frac{12}{50} = \frac{3 \times 5}{10 \times 5}, \frac{12}{50} = \frac{15}{50}, \frac{12}{50}$$

Therefore, $\frac{3}{10}, \frac{12}{50}$ are not equivalent.

$$(c) \frac{7}{13}, \frac{5}{11} = \frac{7 \times 11}{13 \times 11}, \frac{5 \times 13}{11 \times 13} = \frac{77}{143}, \frac{65}{143}$$

Therefore, $\frac{7}{13}, \frac{5}{11}$ are not equivalent fraction.

Question 7:

Reduce the following fractions to simplest form:

$$(a) \frac{48}{60} \quad (b) \frac{150}{60} \quad (c) \frac{84}{98} \quad (d) \frac{12}{52} \quad (e) \frac{7}{28}$$

Answer 7:

$$(a) \frac{48}{60} = \frac{\cancel{2} \times \cancel{2} \times 2 \times 2 \times \cancel{3}}{\cancel{2} \times \cancel{2} \times \cancel{3} \times 5} = \frac{4}{5} \quad (b) \frac{150}{60} = \frac{\cancel{3} \times 5 \times \cancel{10}}{2 \times \cancel{3} \times \cancel{10}} = \frac{5}{2}$$

$$(c) \frac{84}{98} = \frac{2 \times 3 \times \cancel{14}}{7 \times \cancel{14}} = \frac{6}{7} \quad (d) \frac{12}{52} = \frac{\cancel{2} \times \cancel{2} \times 3}{\cancel{2} \times \cancel{2} \times 13} = \frac{3}{13}$$

$$(e) \frac{7}{28} = \frac{\cancel{7}}{2 \times 2 \times \cancel{7}} = \frac{1}{4}$$

Question 8:

Ramesh had 20 pencils, Sheelu had 50 pencils and Jamaal had 80 pencils. After 4 months, Ramesh used up 10 pencils, Sheelu used up 25 pencils and Jamaal used up 40 pencils. What fraction did each use up? Check if each has used up an equal fraction of her/his pencils?

Answer 8:

Ramesh: Total pencils = 20
Pencils used = 10
Fraction = $\frac{10}{20} = \frac{1}{2}$

Sheelu: Total pencils = 50
Pencils used = 25
Fraction = $\frac{25}{50} = \frac{1}{2}$

Jamaal: Total pencils = 80
Pencils used = 40
Fraction = $\frac{40}{80} = \frac{1}{2}$

Since, all of them used half of their pencils, therefore each one used up equal fraction of pencils.

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Question 9:

Match the equivalent fractions and write two more for each:

(i) $\frac{250}{400}$

(a) $\frac{2}{3}$

(ii) $\frac{180}{200}$

(b) $\frac{2}{5}$

(iii) $\frac{660}{990}$

(c) $\frac{1}{2}$

(iv) $\frac{180}{360}$

(d) $\frac{5}{8}$

(v) $\frac{220}{550}$

(e) $\frac{9}{10}$

Answer 9:

(i) $\frac{250}{400} = \frac{5}{8}, \frac{10}{16}, \frac{15}{24}$

(d) $\frac{5}{8}$

(ii) $\frac{180}{200} = \frac{9}{10}, \frac{18}{20}, \frac{27}{30}$

(e) $\frac{9}{10}$

(iii) $\frac{660}{990} = \frac{2}{3}, \frac{4}{6}, \frac{6}{9}$

(a) $\frac{2}{3}$

(iv) $\frac{180}{360} = \frac{1}{2}, \frac{2}{4}, \frac{3}{6}$

(c) $\frac{1}{2}$

(v) $\frac{220}{550} = \frac{2}{5}, \frac{4}{10}, \frac{6}{15}$

(b) $\frac{2}{5}$

